

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
4 August 2005 (04.08.2005)

PCT

(10) International Publication Number
WO 2005/071025 A1

(51) International Patent Classification⁷: C09D 11/00,
C09B 67/00, 47/26

(74) Agents: MORPETH, Fraser, Forrest et al.; Avecia Inkjet
Limited, Intellectual Property Group, PO Box 42, Hexagon
Tower, Blackley, Manchester M9 8ZS (GB).

(21) International Application Number:
PCT/GB2004/004950

(22) International Filing Date:
24 November 2004 (24.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0401540.0 23 January 2004 (23.01.2004) GB

(71) Applicant (for all designated States except US): AVECIA
INKJET LIMITED [GB/GB]; PO Box 42, Hexagon
Tower, Blackley, Manchester M9 8ZS (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): WATSON, Gra-
ham, Michael [GB/GB]; Earls Road, Grangemouth,
Stirlingshire FK3 8XG (GB). JOHNSON, Jill, Louise
[GB/GB]; Earls Road, Grangemouth, Stirlingshire FK3
8XG (GB). PATEL, Prakash [GB/GB]; Hexagon House,
P.O. Box 42, Blackley, Manchester M9 8ZS (GB). FERN,
William, Albert [GB/GB]; Hexagon House, P.O. Box 42,
Blackley, Manchester M9 8ZS (GB).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

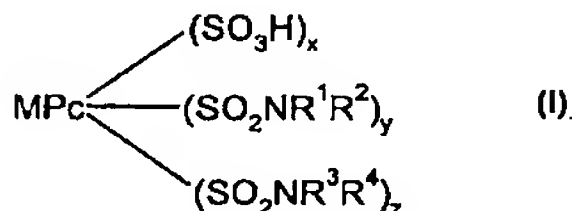
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: PROCESS FOR THE FRACTIONATION OF MIXTURES OF PHTHALOCYANINE DYES



(57) Abstract: Process for forming an image on a substrate comprising applying an ink thereto by means of an ink-jet printer wherein the ink comprises a liquid medium and a phthalocyanine dye fraction obtainable, by the fractionation of a solution and/or suspension of a mixture of phthalocyanine dyes of Formula: (I), and salts thereof, by cross-flow filtration: Formula: (I) wherein: M is 2H, copper or nickel; Pc represents a phthalocyanine nucleus; R¹ and R³ independently are H or optionally substituted C₁₋₄alkyl; R² and R⁴ independently are H or optionally substituted hydrocarbyl; or R¹ and R², and, R³ and R⁴, independently, together with the nitrogen atom to which they are attached represent an optionally substituted aliphatic or aromatic ring system; x is 0 to 3.9; y is 0 to 3.9; z is 0.1 to 4; and the sum of (x+y+z) is 2.4 to 4.5.

WO 2005/071025 A1